




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY

7411 Beach Dr. East
Port Orchard, Washington 98366

January 5, 1995

MEMORANDUM

SUBJECT: Spokane Junkyard Total Metals in Soil
Sample Nos: 94414390 - 94464300

FROM: Isabel Chamberlain, Task Monitor, USEPA, Region 10 

TO: Kevin Rochlin, Site Manager, USEPA, Region 10

FULL DATA REVIEW

I have reviewed the attached data package and the corresponding raw data. Based on this review, I find that the Self Evaluation Report prepared by the ESAT contractor was conducted in accordance with the Functional Guidelines, and that the data qualifiers recommended in the ESAT contractor's evaluation are appropriate.

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ENVIRONMENTAL SERVICE ASSISTANCE TEAMS - ZONE 2

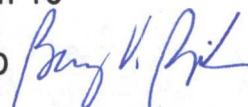
ICF Technology Inc.
ManTech Environmental

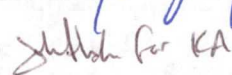
ESAT Region 10
ICF Technology Inc.
7411 Beach Drive East
Port Orchard, WA 98366
Phone (206) 871-8760

MEMORANDUM

DATE: December 22, 1994

TO: Jerry Muth, Regional Project Officer, USEPA, Region 10
Isa Chamberlain, Task Monitor, USEPA, Region 10
Kevin Rochlin, Project Manager, USEPA, Region 10

THROUGH: Barry Pepich, Team Manager, ESAT, Region 10 

FROM: Katie Adams, Chemist, ESAT, Region 10 

SUBJECT: Quality Assurance Review of the Metals analysis of Spokane Junkyard soil samples.
Sample Nos: 94414390 - 94464300
Project Code: TEC-637A; Account Code: 955T10PTFA10A5U

TID#: 10-9410-509
DOC#: ESAT-10A-7659
WUD#: 1517

cc: Charles Stringer, USEPA-OCI, SO-155

The following is a quality assurance review of the metals analysis of four soil samples from the Spokane Junkyard site, Spokane, WA. The analysis was performed following CLP and laboratory guidelines by the ESAT Team at the USEPA Manchester Environmental Laboratory, Port Orchard, WA. This quality assurance review was conducted for the following samples:

94414390 94414393 94414394 94464300

DATA QUALIFICATIONS

The following comments refer to the ESAT Team's performance in meeting quality control specifications outlined in the *CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILMO3.0*, the *Manchester Environmental Laboratory Quality Assurance Manual, revision 5/88*, and the *Spokane Junkyard Quality Assurance Project Plan, August, 1994*. The recommendations presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The suggested holding time from the date of collection for mercury in soil is 28 days and the holding time for remaining metals in soil is 180 days. The samples were collected between 10/22/94 and 11/15/94. Mercury analysis was performed on 11/15/94 and 12/01/94, such that the maximum holding time for any sample was twenty-four days. The remaining metals analyses were completed by 12/14/94, fifty-three days from collection of the first sample. No qualification was recommended based on these holding time criteria.

2.0 SAMPLE PREPARATION - Acceptable

The samples were prepared using hot-plate digestion on 11/22/94, and for mercury on 11/15/94 and 11/30/94. All samples were dried (at 100 °C for ICP-AES and GFAAS, and 50 °C for CVAAS) and homogenized prior to digestion. Results were reported on a dry weight basis. All procedures were in accordance with Manchester Laboratory and CLP protocols. No qualification was recommended on this basis.

3.0 CALIBRATION - Acceptable

The samples were analyzed by ICP-AES (Inductively Coupled Plasma - Atomic Emission Spectroscopy) on 12/01/94 and 12/14/94. The instrument was standardized according to the analytical method using a blank and a series of calibration standards.

The samples were analyzed by GFAAS (Graphite Furnace Atomic Absorption Spectroscopy) on 11/23/94 through 12/01/94 for arsenic, lead, selenium, and thallium. The instrument was calibrated according to the analytical method with a matrix blank and four standards. Correlation coefficients were greater than the minimum 0.995.

The samples were analyzed by CVAAS (Cold Vapor Atomic Absorption Spectroscopy) on 11/15/94 and 12/01/94 for mercury. Initial calibrations included a blank and at least four standards, as required. The curves were linear with correlation coefficients greater than 0.995.

All calibrations met acceptance criteria; therefore no qualification was recommended on this basis.

4.0 REFERENCE CONTROL SAMPLES/CALIBRATION VERIFICATION - Acceptable

Laboratory reference control samples are required before and after sample analysis and after every 10 samples during analysis. All control samples met frequency and recovery criteria of 90 - 110% for ICP-AES and GFAAS, and 80 - 120% for CVAAS (mercury) analysis. Qualification was not recommended on this basis.

5.0 BLANKS - Acceptable

Procedural blanks were prepared with the samples to indicate potential contamination from the digestion or analysis procedure. If an analyte was found in the associated blank, the

sample results were recommended for qualification if the analyte concentration was less than ten times the analytical value in the blank.

Low levels of calcium, iron, potassium, and sodium were detected in the ICP procedural blank. Lead was also detected in the GFAA procedural blank. Because of the high levels of these analytes in the samples, no qualification was recommended based on the above criteria.

6.0 ICP-AES INTERFERENCE CHECK SAMPLE - Acceptable

The interference check sample (ICS) is analyzed by ICP-AES to verify interelement and background correction factors. Analysis is required at the beginning and end of each sample analysis run. The acceptance criterion for the ICS is 80% - 120%. All results met frequency and recovery requirements on the days of analysis.

7.0 DUPLICATE ANALYSIS - Acceptable

All duplicate analysis met Manchester and QAPP guidelines. All results above the instrument practical quantitation limit displayed RPDs of less than 20%, as specified in the quality assurance plan. No qualification was recommended on this basis.

8.0 FIELD DUPLICATE ANALYSIS - Not Applicable

Field duplicate analysis was not indicated on the chain of custody documentation.

9.0 MATRIX SPIKE ANALYSIS

Matrix spike sample analyses are performed to provide information about the effect of the sample matrix on measurement methods. Manchester Laboratory and CLP guidelines specify that the spike recovery must be within the limits of 75 - 125%. Post spike recoveries are required to be within 85% to 115% of the spike added to the sample.

If the spike amount added is less than one quarter of the sample concentration, the recovery is not reported or used to qualify the data. Also, if the spike recovery is above 125% and the sample result is below the detection limit of that analyte, the results are not qualified.

A post spike recovery in the acceptance range is an indication of the analytical performance but does not represent analyte recovery from the digestion process.

If a procedural spike fails the above criteria, the sample results for that element are qualified with an (N). If a post spike fails the above criteria, the sample results for that element are qualified with an (E). In cases where the sample result exceeded four times the spike amount added, these limits do not apply and the recovery is reported "NA".

Matrix and duplicate spike analyses were performed on sample 94464300 for ICP-AES and GFAAS, and on samples 94414393 and 94464300 for CVAAS (mercury). All recoveries met the acceptance criteria except for antimony (0/5%) and arsenic (129/123%).

Acceptable post spike recoveries for both analytes were obtained. Results for antimony were recommended for qualification (N). In the opinion of the reviewer, the results for arsenic do not require qualification because the spike amount was low relative to the amount in the sample, particularly in view of the fifteen-fold dilution required to achieve a result within the calibration range of the instrument.

10.0 GRAPHITE FURNACE ATOMIC ABSORPTION SPEC. (GFAAS) QC - Acceptable

All GFAAS post spike recoveries and duplicate analyses were within acceptable limits of accuracy except for sample 94464300 for thallium, which had a recovery of 120%. However, this high spike recovery does not indicate a high bias in the sample, as thallium was not detected in the sample. All duplicate injections were within acceptable limits (10% RPD), according to laboratory criteria. No qualification was recommended on this basis.

11.0 ICP-AES SERIAL DILUTION - Acceptable

Serial dilution analysis was performed on sample 94464300. All percent differences were within the required 10% criterion range. No qualification was recommended on this basis.

12.0 DETECTION LIMITS - Acceptable

Sample results which fall below the instrument detection limit (IDL) are assigned the value of the instrument detection limit and the (U) qualifier is recommended for attachment. Any sample result falling between the detection limit and the quantitation limit is recommended for qualification as an estimate (P). This notifies the data user that the element was detected at the reported value, but below the minimum level of practical quantitation determined to be within precision limits of 10% relative standard deviation.

13.0 OVERALL ASSESSMENT OF THE DATA

The quality assurance review of the data is based on the criteria outlined in the *Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (7/88)*.

The following is a summary of the recommended qualification for the Spokane Junkyard soils analysis, sample numbers 94414390, 94414393, 94414394 and 94464300.

The (U) qualifier was recommended for attachment to sample results below the minimum level of detection. The (P) qualifier was recommended for attachment to sample results less than the laboratory's quantitation limit.

The (N) qualifier was recommended for attachment to all antimony results (4.3% of the data) due to low matrix spike recoveries but acceptable post spike recoveries.

Definitions of laboratory data qualifiers are attached.

USEPA Region 10 Laboratory

Below are the definitions for the qualifiers used in the metals area when qualifying data from metals analysis.

DATA QUALIFIERS

- U - Element was analyzed but not detected. The associated numerical value is the instrument detection limit/method detection limit.
- P - The analyte was detected above the Instrument Detection Limit, but not quantified within expected limits of precision. The laboratory has established minimum quantitation limits having a relative standard deviation of no more than 10%.
- H - The samples were analyzed after the suggested holding time limit.
- E - The reported value is an estimate because of the presence of interference. An explanatory note will be included with the report.
- B - Analyte is found in the analytical blank as well as the sample indicating possible/probable blank contamination. If analytes are found in any of the associated procedural blanks the concentration in the samples must be at least ten times the quantity observed in the blank. If the sample result fails these criteria the sample result is qualified (B).
- N - Spiked sample recovery not within control limits.
- NAR - There is no analysis result for this analyte.
- NA - Not Applicable/Not Required.
- S - Sample was analyzed by method of standard additions.
- + - Sample was analyzed by method of standard additions and the correlation coefficient was less than 0.995.
- * - The analyte was present in the sample.
- W - Post spike out of specified range, and sample was less than 50% the spike added.

Manchester Environmental Laboratory

Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 10/22/94
Matrix: Solid
Sample Number: 94414390
Type: Reg sample
Station Description: MW-2

Analyte	Result	Units	Qlfr
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MET

Arsenic by AA, RAS

Arsenic	10.8	mg/kg	
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Selenium by AA, RAS

Selenium	0.20	mg/kg	U
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Thallium by AA, RAS

Thallium	0.25	mg/kg	U
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All MERCURY tests

Mercury	0.043	mg/kg	
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Metals, ICP RAS

Aluminum	10500	mg/kg	
Antimony	4.0	mg/kg	U
Barium	61.3	mg/kg	
Beryllium	0.43	mg/kg	P
Cadmium	0.20	mg/kg	U
Calcium	9230	mg/kg	
Chromium	83.5	mg/kg	
Cobalt	56.0	mg/kg	
Copper	16.1	mg/kg	
Iron	19500	mg/kg	
Lead	61.2	mg/kg	
Magnesium	8640	mg/kg	

Analyte	Result	Units	Qlfr
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Manganese	384	mg/kg	
Nickel	40.7	mg/kg	
Potassium	2590	mg/kg	
Silver	0.37	mg/kg	P
Sodium	159	mg/kg	
Vanadium	15.3	mg/kg	
Zinc	66.6	mg/kg	

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

Manchester Environmental Laboratory

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 11/ 1/94
Matrix: Solid
Sample Number: 94414393
Type: Reg sample
Station Description: MW-1

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
MET							
Arsenic by AA, RAS							
Arsenic	11.3	mg/kg					
Selenium by AA, RAS							
Selenium	0.20	mg/kg	U				
Thallium by AA, RAS							
Thallium	0.25	mg/kg	U				
All MERCURY tests							
Mercury	0.052	mg/kg					
Metals, ICP RAS							
Aluminum	10500	mg/kg		Manganese	441	mg/kg	
Antimony	4.0	mg/kg	U	Nickel	277	mg/kg	
Barium	74.9	mg/kg		Potassium	2710	mg/kg	
Beryllium	0.38	mg/kg	P	Silver	0.30	mg/kg	U
Cadmium	0.36	mg/kg	P	Sodium	215	mg/kg	
Calcium	13300	mg/kg		Vanadium	19.8	mg/kg	
Chromium	143	mg/kg		Zinc	73.9	mg/kg	
Cobalt	90.7	mg/kg					
Copper	26.3	mg/kg					
Iron	22400	mg/kg					
Lead	55.4	mg/kg					
Magnesium	8320	mg/kg					

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94414393
Type: Duplicate
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET

All MERCURY tests
Mercury

0.054 mg/kg

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94414393
Type: Matrix Spike
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET

All MERCURY tests

Mercury	110	%Rec	
---------	-----	------	--

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94414393
Type: Matrix Spike Dupl
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET

All MERCURY tests

Mercury	102	%Rec	
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Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 11/ 1/94
Matrix: Solid
Sample Number: 94414394
Type: Reg sample
Station Description: MW1

Analyte	Result	Units	Qlfr
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MET**Arsenic by AA, RAS**

Arsenic	8.38	mg/kg	
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Selenium by AA, RAS

Selenium	0.20	mg/kg	U
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Thallium by AA, RAS

Thallium	0.25	mg/kg	U
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All MERCURY tests

Mercury	0.063	mg/kg	
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Metals, ICP RAS

Aluminum	9890	mg/kg	
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Antimony	4.0	mg/kg	U
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Barium	70.1	mg/kg	
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Beryllium	0.36	mg/kg	P
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Cadmium	0.20	mg/kg	U
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Calcium	13500	mg/kg	
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Chromium	105	mg/kg	
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Cobalt	87.8	mg/kg	
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Copper	21.6	mg/kg	
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Iron	21100	mg/kg	
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Lead	37.4	mg/kg	
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Magnesium	7710	mg/kg	
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Analyte	Result	Units	Qlfr
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Manganese	388	mg/kg	
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Nickel	43.1	mg/kg	
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Potassium	2650	mg/kg	
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Silver	0.30	mg/kg	U
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Sodium	180	mg/kg	
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Vanadium	19.1	mg/kg	
----------	------	-------	--

Zinc	62.8	mg/kg	
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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 11/15/94
Matrix: Solid
Sample Number: 94464300
Type: Reg sample
Station Description: MW-3

Analyte	Result	Units	Qlfr
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MET

Arsenic by AA, RAS

Arsenic	16.5	mg/kg	
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Lead by AA, RAS

Lead	10.5	mg/kg	
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Selenium by AA, RAS

Selenium	0.20	mg/kg	U
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Thallium by AA, RAS

Thallium	0.50	mg/kg	U
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All MERCURY tests

Mercury	0.020	mg/kg	U
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Metals, ICP RAS

Aluminum	10200	mg/kg	
Antimony	4.0	mg/kg	UN
Barium	56.5	mg/kg	
Beryllium	0.529	mg/kg	
Cadmium	0.20	mg/kg	U
Calcium	21500	mg/kg	
Chromium	26.2	mg/kg	
Cobalt	13.4	mg/kg	
Copper	15.3	mg/kg	
Iron	20400	mg/kg	

Analyte	Result	Units	Qlfr
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Magnesium	9820	mg/kg	
Manganese	372	mg/kg	
Nickel	19.2	mg/kg	
Potassium	2430	mg/kg	
Silver	0.30	mg/kg	U
Sodium	112	mg/kg	
Vanadium	15.4	mg/kg	
Zinc	53.5	mg/kg	

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94464300
Type: Duplicate
Station Description:

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
MET							
Arsenic by AA, RAS							
Arsenic	16.8	mg/kg					
Lead by AA, RAS							
Lead	10.5	mg/kg					
Selenium by AA, RAS							
Selenium	0.20	mg/kg	U				
Thallium by AA, RAS							
Thallium	0.50	mg/kg	U				
All MERCURY tests							
Mercury	0.020	mg/kg	U				
Metals, ICP RAS							
Aluminum	10500	mg/kg		Magnesium	9800	mg/kg	
Antimony	4.0	mg/kg	UN	Manganese	376	mg/kg	
Barium	58.1	mg/kg		Nickel	21.4	mg/kg	
Beryllium	0.507	mg/kg		Potassium	2560	mg/kg	
Cadmium	0.20	mg/kg	U	Silver	0.30	mg/kg	U
Calcium	20800	mg/kg		Sodium	119	mg/kg	
Chromium	29.8	mg/kg		Vanadium	15.8	mg/kg	
Cobalt	14.2	mg/kg		Zinc	54.2	mg/kg	
Copper	16.2	mg/kg					
Iron	20700	mg/kg					

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94464300
Type: Matrix Spike
Station Description:

Analyte	Result	Units	Qlfr
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MET**Arsenic by AA, RAS**

Arsenic	129	%Rec
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Lead by AA, RAS

Lead	97	%Rec
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Selenium by AA, RAS

Selenium	87	%Rec
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Thallium by AA, RAS

Thallium	91	%Rec
----------	----	------

All MERCURY tests

Mercury	100	%Rec
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Metals, ICP RAS

Aluminum	NA	%Rec
----------	----	------

Antimony	0	%Rec
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Barium	100	%Rec
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Beryllium	104	%Rec
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Cadmium	113	%Rec
---------	-----	------

Calcium	NA	%Rec
---------	----	------

Chromium	97	%Rec
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Cobalt	102	%Rec
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Copper	102	%Rec
--------	-----	------

Iron	NA	%Rec
------	----	------

Analyte	Result	Units	Qlfr
---------	--------	-------	------

Magnesium	NA	%Rec
-----------	----	------

Manganese	98	%Rec
-----------	----	------

Nickel	102	%Rec
--------	-----	------

Potassium	NA	%Rec
-----------	----	------

Silver	102	%Rec
--------	-----	------

Sodium	NA	%Rec
--------	----	------

Vanadium	103	%Rec
----------	-----	------

Zinc	104	%Rec
------	-----	------

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

Manchester Environmental Laboratory

Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: 94464300
Type: Matrix Spike Dupl
Station Description:

Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET**Arsenic by AA, RAS**

Arsenic	123	%Rec	
---------	-----	------	--

Lead by AA, RAS

Lead	97	%Rec	
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Selenium by AA, RAS

Selenium	88	%Rec	
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Thallium by AA, RAS

Thallium	91	%Rec	
----------	----	------	--

All MERCURY tests

Mercury	102	%Rec	
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Metals, ICP RAS

Aluminum	NA	%Rec	
Antimony	5	%Rec	
Barium	102	%Rec	
Beryllium	105	%Rec	
Cadmium	111	%Rec	
Calcium	NA	%Rec	
Chromium	90	%Rec	
Cobalt	102	%Rec	
Copper	107	%Rec	
Iron	NA	%Rec	

Analyte	Result	Units	Qlfr
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Magnesium	NA	%Rec	
Manganese	98	%Rec	
Nickel	99	%Rec	
Potassium	NA	%Rec	
Silver	100	%Rec	
Sodium	NA	%Rec	
Vanadium	104	%Rec	
Zinc	102	%Rec	

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: S941115A
Type: Blank
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET**All MERCURY tests**

Mercury	0.020	mg/kg	U
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S941115A Blank

Manchester Environmental Laboratory

Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: S941122A
Type: Blank
Station Description:

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
MET							
Arsenic by AA, RAS							
Arsenic	0.15	mg/kg	U				
Lead by AA, RAS							
Lead	0.18	mg/kg	P				
Selenium by AA, RAS							
Selenium	0.20	mg/kg	U				
Thallium by AA, RAS							
Thallium	0.25	mg/kg	U				
Metals, ICP RAS							
Aluminum	2.0	mg/kg	U	Nickel	1.0	mg/kg	U
Antimony	4.0	mg/kg	U	Potassium	87	mg/kg	P
Barium	0.20	mg/kg	U	Silver	0.30	mg/kg	U
Beryllium	0.050	mg/kg	U	Sodium	4.1	mg/kg	P
Cadmium	0.20	mg/kg	U	Vanadium	0.30	mg/kg	U
Calcium	1.17	mg/kg		Zinc	0.40	mg/kg	U
Chromium	0.50	mg/kg	U				
Cobalt	1.0	mg/kg	U				
Copper	0.30	mg/kg	U				
Iron	1.2	mg/kg	P				
Magnesium	2.0	mg/kg	U				
Manganese	0.10	mg/kg	U				

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Analyte

Result

Units

Qlfr

Analyte

Result

Units

Qlfr

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: S941122A
Type: Spike Blank
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
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MET

Selenium by AA, RAS
Selenium

99 %Rec

S941122A Spike Blank

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Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Solid
Sample Number: S941130C
Type: Blank
Station Description:

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
---------	--------	-------	------

MET**All MERCURY tests**

Mercury	0.020	mg/kg	U
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